

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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Introduction & User List

Product Overview

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Vertical Sewage Pumps Series 700

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Vertical Vortex Pumps Series 900

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Horizontal End Suction
Pumps-Centrifugal Series 1300 and 1400

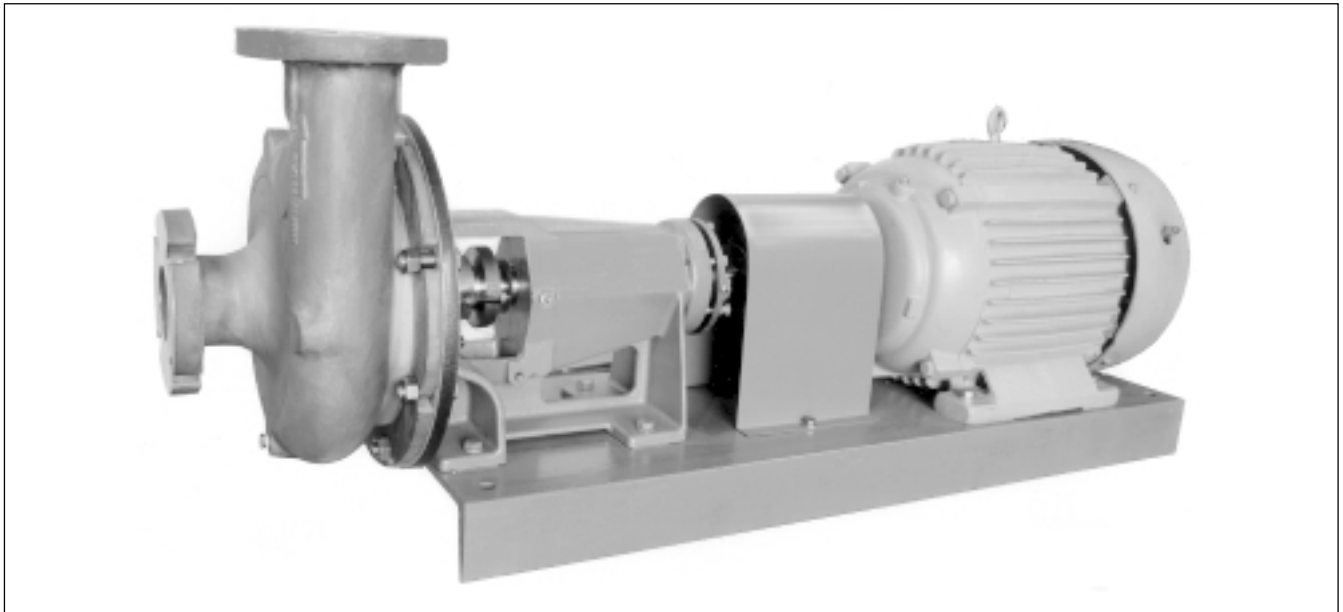
**Horizontal End Suction
Pumps-Vortex Series 1500 and 1600**

Horizontal Self-priming
Pumps- Centrifugal Series 2100

Engineering Sample Specifications

VERTIFLO SERIES 1500

Quality Design Features Assure Long, Trouble-Free Service

**WIDE RANGE OF APPLICATIONS:**

- Food Processing Solids
- Waste Water Treatment
- Pollution Control
- Slurries
- Industrial Process
- Solids

CAPABILITIES:

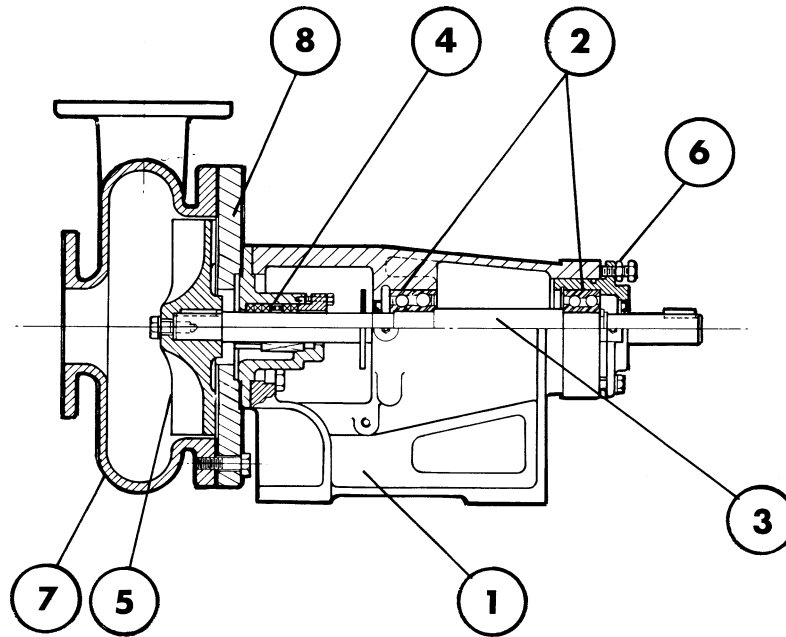
- Capacities to 1600 GPM
- Heads To 170 Feet TDH
- Temperature to 250°F
- Back Pull-Out Construction
- Fully Recessed Vortex Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

CONSTRUCTION:

- Cast Iron
- 316 Stainless Steel Fitted
- All 316 Stainless Steel
- Alloy 20
- CD4MC_u

Series 1500 horizontal base-mounted end suction pumps are designed for use with any T or U frame motor, or with virtually any type of drive. VERTIFLO's base-mounted pumps are designed with back pull-out feature. This important feature allows for easy inspection or service/ maintenance (if ever needed) without disturbing the piping to the pump: an important cost saving feature.

Packing or various mechanical seal arrangements are available as standard options of this rugged, dependable product.



1. Power Frame

Rugged heavy duty cast iron design incorporating integrally cast support and ribbed mounting feet which assure a solid, dependable pump installation and operation. One frame fits all pump sizes. External impeller adjustment is standard. Grease lubrication of bearings is standard; oil lubrication available.

2. Bearings

Series 1500 contains a high capacity cartridge-mounted double row thrust bearing allowing use on high suction pressure applications. Radial bearing is single row or double row and floats in a precision bored housing.

3. Shaft

416 stainless steel, precision machined with preferred taper at impeller location. Positive attachment is provided with castellated impeller nut and cotter pin, which assures that the impeller will not back off the shaft if the pump is accidentally operated in reverse rotation. 316 stainless steel shaft is optional.

4. Shaft Sealing

Packed arrangement utilizes a 2-piece split gland, slinger, Teflon® split lantern ring and 5-ring packing set. Grease lubrication is standard with product or water flush available. Wide choice of John Crane and Durametallic mechanical seals of various configurations and materials are optional.

E.I DuPont registered®

5. Impeller

Fully recessed design which accommodates passage of solids. All impellers have wiping vanes which reduce axial loading and prevent dirt from entering the sealing area. Impeller is keyed to shaft with a positive taper fit to assure perfect attachment.

6. Impeller Adjustment

Every power frame contains an external impeller adjustment utilizing jackscrews which provides for clearance adjustment of the impeller. This adjustment feature compensates for internal wear. Expensive casing and impeller wearing rings are eliminated.

7. Casing

Vortex-type concentric design. Extra heavy wall thickness for corrosive allowance. All suction and discharge openings are flanged for installation ease and integrity.

8. Back Pull-Out

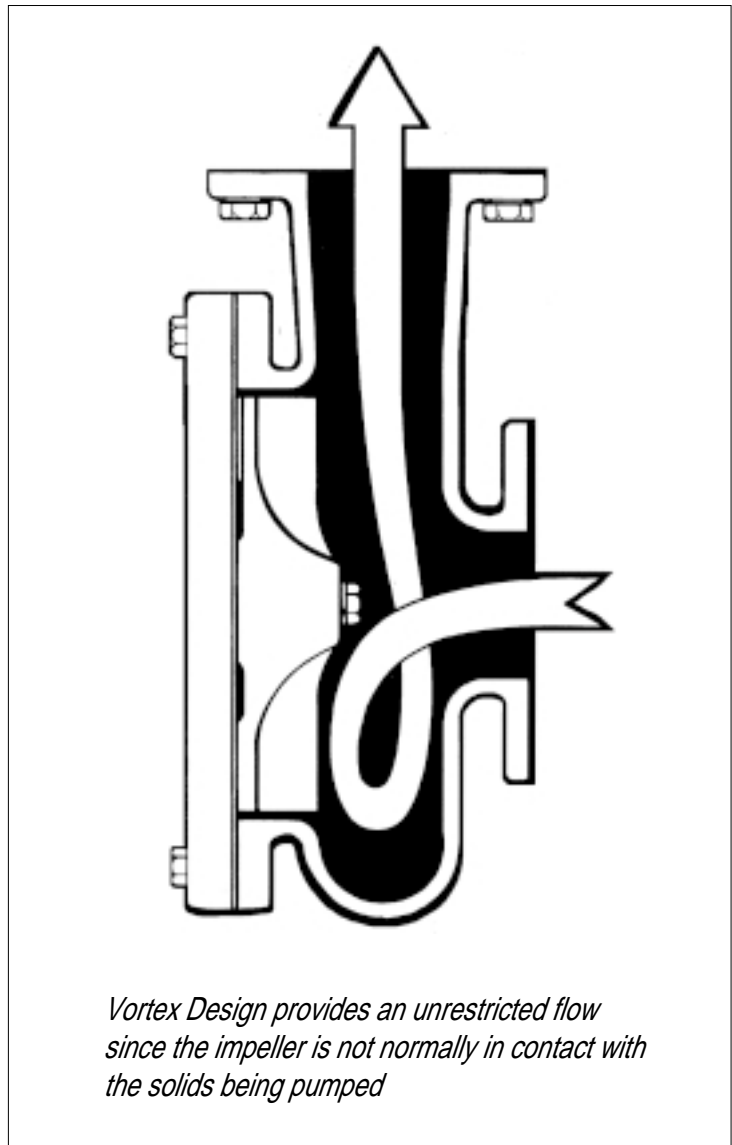
All pumps are designed with back pull-out feature which allows for removal of all pump rotating components without disturbing the piping connections.

Standard

- All iron construction
- 416 stainless steel shaft
- Fully recessed impeller
- Back pull-out design
- Packed stuffing box or mechanical seal
- External impeller adjustment
- Heavy duty power frame
- Regreaseable ball bearings
- Flanged suction and discharge on all sizes
- Flexible coupling
- Steel mounting base

Options

- 316 stainless steel shaft
- 316 stainless steel impeller
- All 316 stainless steel, Alloy 20
- Teflon® packing (standard in s.s. and alloy units)
- Single or double mechanical seal (various materials)
- Product or fresh water flush to packing or mechanical seal
- Oil lubricated bearings with sight level indicator
- Coupling guard (recommended)
- ODP, TEFC, XP motors
- Steam turbine drive
- Diesel or gasoline engine drive



Vortex Design provides an unrestricted flow since the impeller is not normally in contact with the solids being pumped

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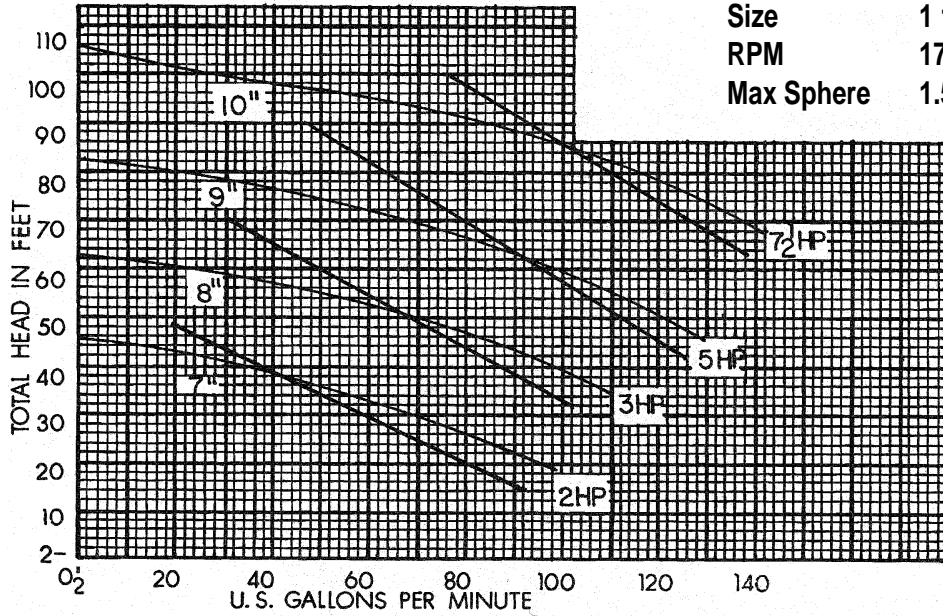


	Design Details	Model 1520	Model 1524
Pump Shaft	Rotation from driver end	CW	CW
	Diameter through stuffing box	1.250	1.500
	Diameter between bearings	1.750	1.750
	Diameter at coupling end	1.250	1.250
	Coupling key - square	0.250	0.250
	Bearing centers	6.692	6.692

VERTIFLO PUMP COMPANY Performance Curves

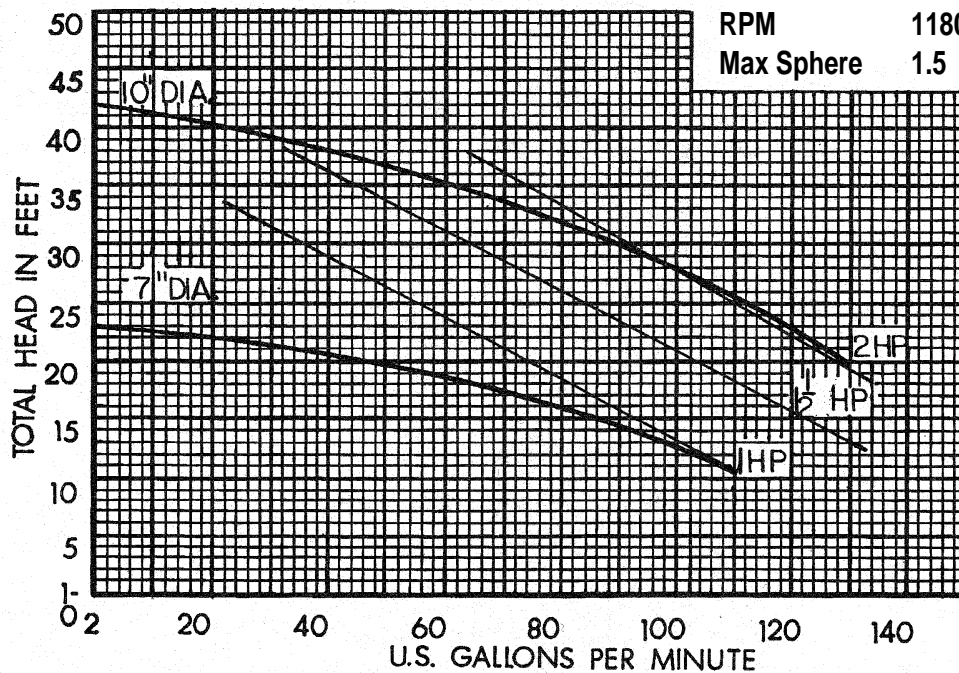
Curve 11104

Series 1500 /1600
 Size 1 1/2 X 1 1/2 X 10
 RPM 1780
 Max Sphere 1.5



Curve 11106

Series 1500 /1600
 Size 1 1/2 X 1 1/2 X 10
 RPM 1180
 Max Sphere 1.5



Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

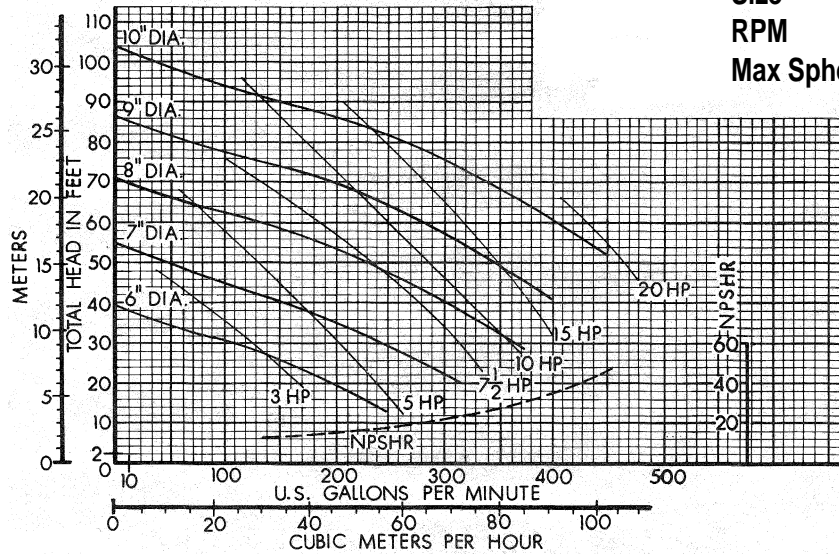
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

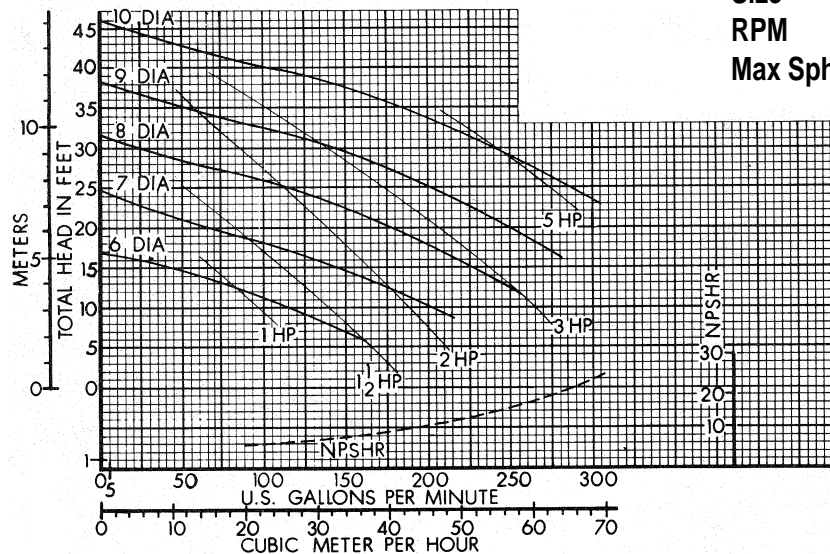
Curve 22104

Series 1500 / 1600
 Size 2 X 2 X 10
 RPM 1780
 Max Sphere 2



Curve 22106

Series 1500 / 1600
 Size 2 X 2 X 10
 RPM 1180
 Max Sphere 2



1500

Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

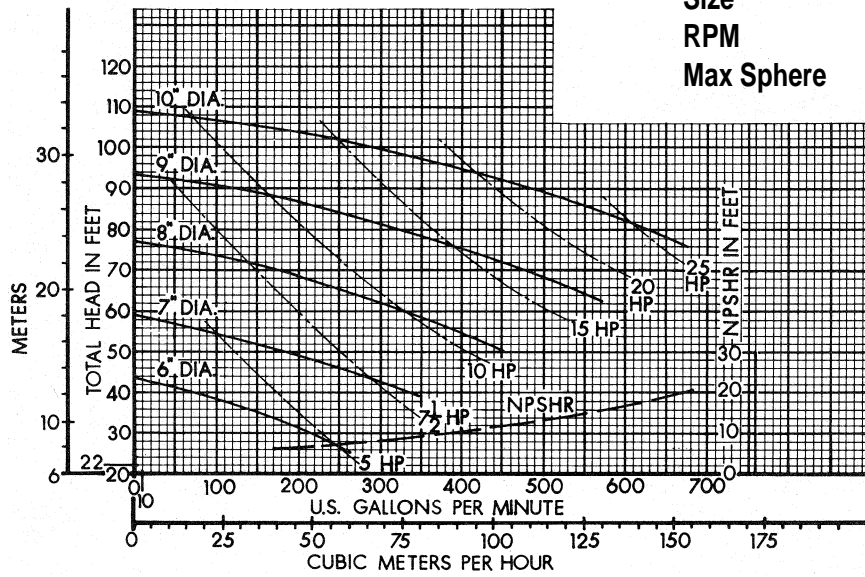
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

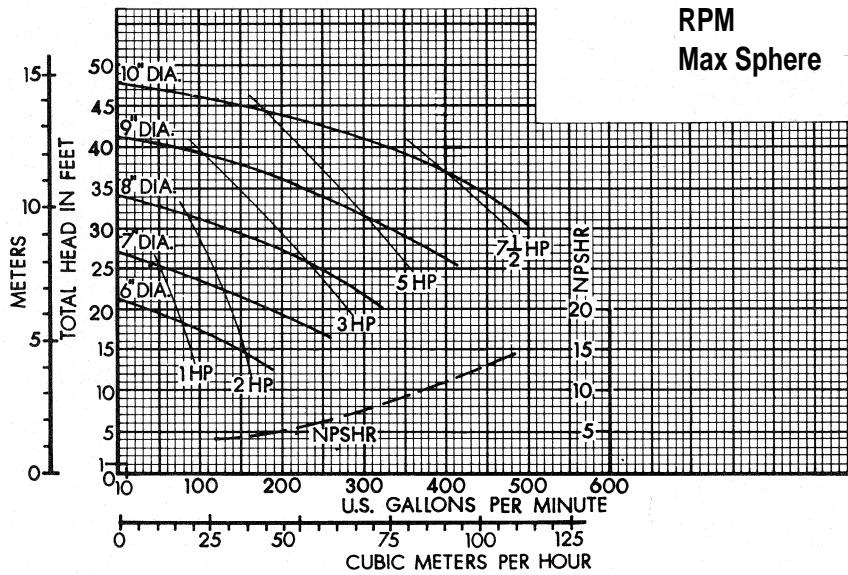
Curve 33104

Series 1500 /1600
 Size 3 X 3 X 10
 RPM 1780
 Max Sphere 3



Curve 33106

Series 1500 /1600
 Size 3 X 3 X 10
 RPM 1180
 Max Sphere 3



Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

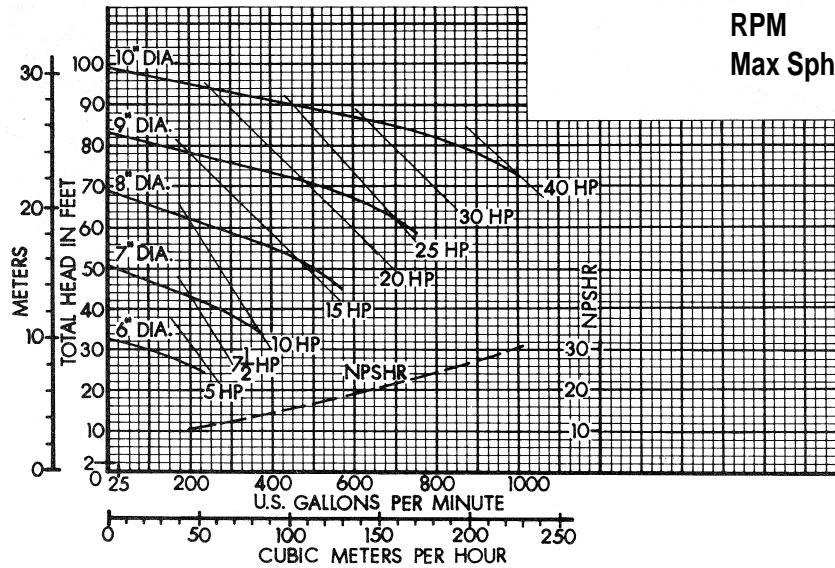
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

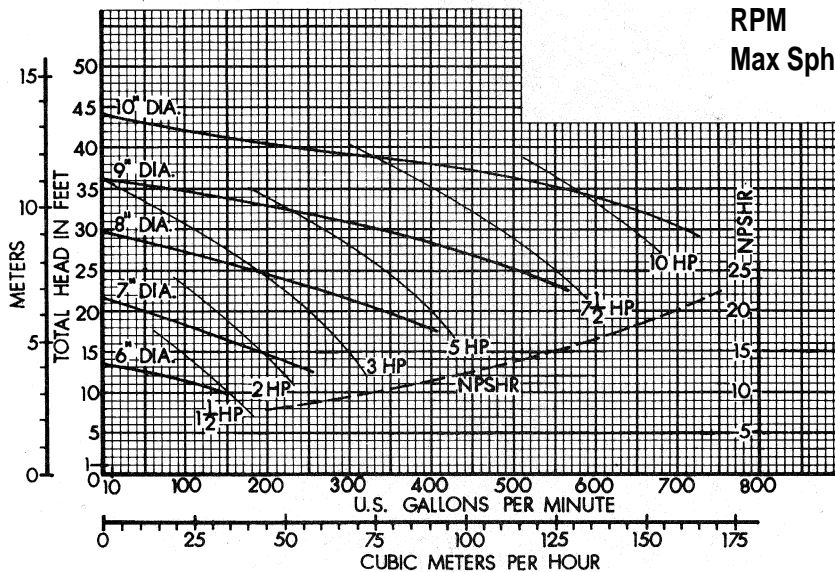
Curve 44104

Series 1500 /1600
 Size 4 X 4 X 10
 RPM 1780
 Max Sphere 4



Curve 44106

Series 1500 /1600
 Size 4 X 4 X 10
 RPM 1180
 Max Sphere 4



Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

CONTRACTOR _____

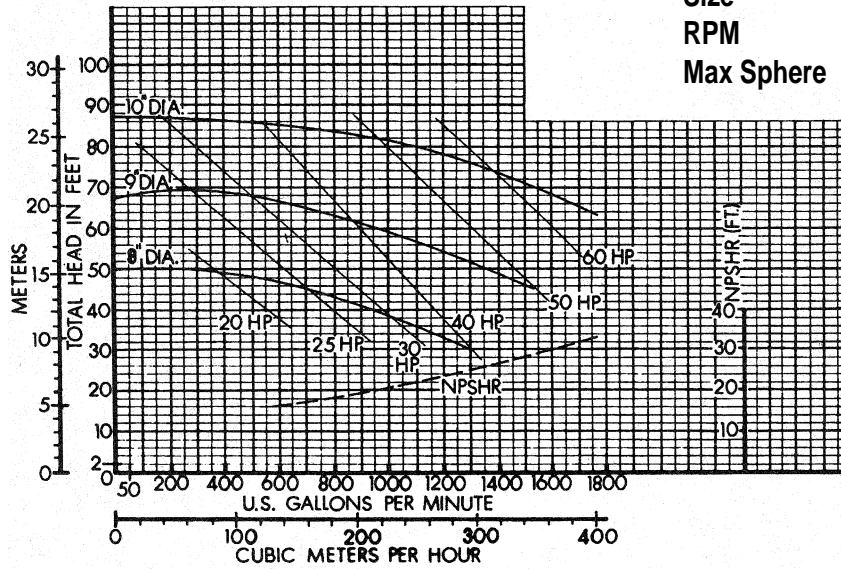
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

1500

VERTIFLO PUMP COMPANY Performance Curves

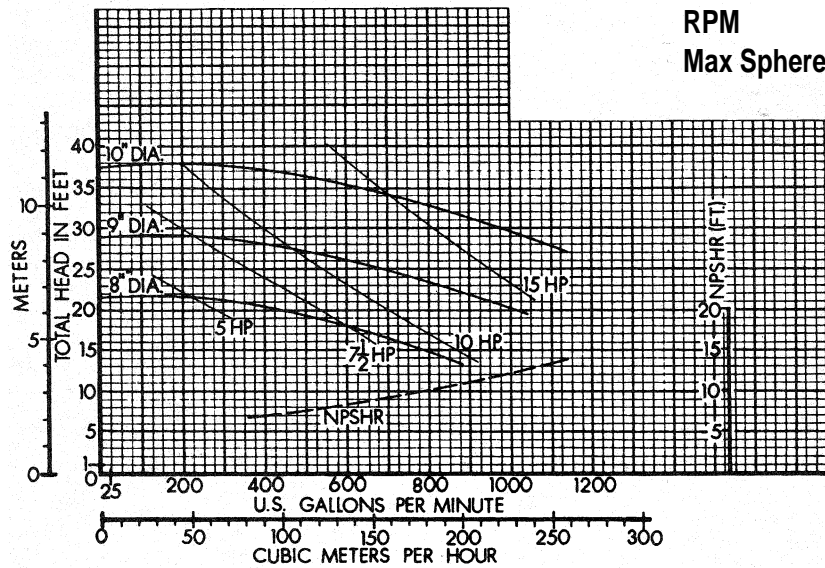
Curve 86104

Series 1500 /1600
 Size 8 X 6 X 10
 RPM 1780
 Max Sphere 6



Curve 86106

Series 1500 /1600
 Size 8 X 6 X 10
 RPM 1180
 Max Sphere 6



Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

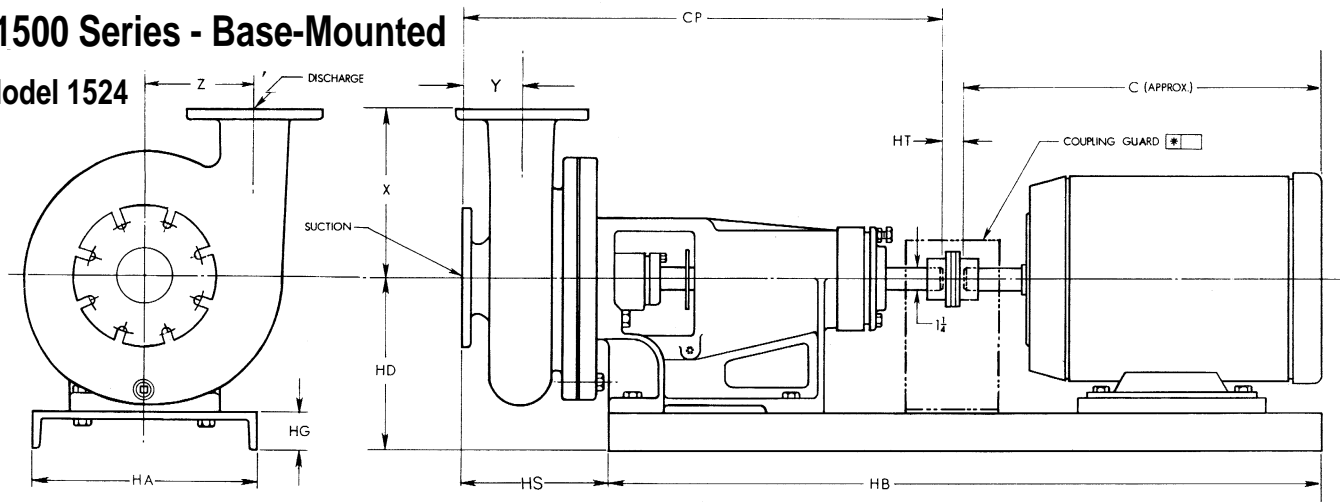
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Dimensions

1500 Series - Base-Mounted

Model 1524



Flanges

Liquid End	FLG. Size	DIA. FLG.	# of Holes	Slot Width	DIA. Circle	X	Y	Z	CP	HS
1½x1½x10	1½	5	4	⅝	3⅞	9	4⅜	5¼	24 ¹¹ / ₁₆	7 ⁷ / ₁₆
2x2x10	2	6	4	¾	4¾	9 ¹¹ / ₁₆	5⅞	5 ⁵ / ₁₆	26 ¹ / ₁₆	8 ⁹ / ₁₆
3x3x10	3	7½	4	¾	6	11	5 ⁷ / ₈	5 ⁵ / ₁₆	27 ¹¹ / ₁₆	10 ⁹ / ₁₆
4x4x10	4	9	8	¾	7½	11 ¹⁹ / ₁₆	7 ⁹ / ₁₆	5 ⁵ / ₁₆	30 ¹ / ₁₆	12 ⁹ / ₁₆
8x6x10	8	13½	8	7/8	11¾	11¾	7 ⁷ / ₈	5¼	30 ¹⁵ / ₁₆	13 ⁷ / ₁₆
	6	11	8	7/8	9½	11¾	7 ⁷ / ₈	5¼	30 ¹⁵ / ₁₆	13 ⁷ / ₁₆

Frame No.	143T	145T	182T	184T	213T	215T	254T	256T	284TS	284T	286TS	286T	324TS	324T	326T	326TS	364TS	364T	365TS	365T
HA	12	12	12	12	12	12	15	15	15	15	15	15	18	18	18	18	18	18	18	18
HB	36	36	36	36	36	36	44	44	44	44	44	44	48	48	48	48	48	48	48	48
C	13⅜	13⅜	14⅝	15⅝	17¾	19¼	22⅞	24⅝	24½	25⅞	26	27⅞	27¼	28¾	28¾	30¼	31	33⅜	32	34⅜
HD	10	10	10	10	10	10	10%	10%	10%	10%	10%	10%	12	12	12	12	13	13	13	13
HG	3	3	3	3	3	3	3⅜	3⅜	3⅜	3⅜	3⅜	3⅜	4	4	4	4	4	4	4	4
HT	¾	¾	¾	¾	¾	¾	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

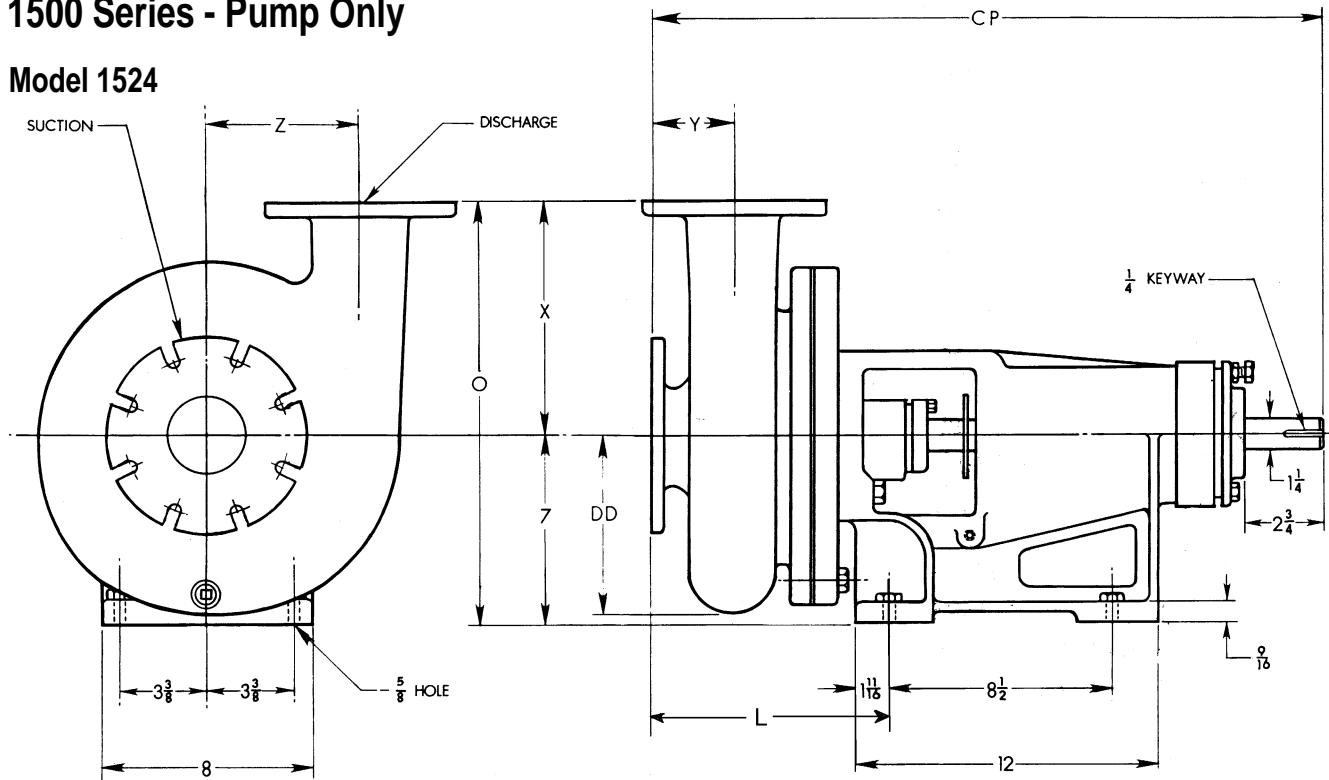
1500

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR. @Temp. _____
 DATA _____
 MOTOR Mfr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERTIFLO PUMP COMPANY Dimensions

1500 Series - Pump Only

Model 1524



		Flanges											
Liquid End	FLG. Size	DIA. FLG.	# of Holes	Slot Width	DIA. Circle	X	Y	Z	CP	DD	L	O	
1½x1½x10	1½	5	4	5/8	3¾	9	4¾	5¼	24½	7½	7¼	16	
2x2x10	2	6	4	¾	4¾	9½	5½	5¾	26½	7½	8½	16½	
3x3x10	3	7½	4	¾	6	11	5¾	5¾	27½	7½	10¼	18	
4x4x10	4	9	8	¾	7½	11¾	7¾	5¾	30½	7½	12½	18½	
8x6x10	8	13½	8	7/8	11¾	11¾	7¾	5¼	30½	8½	13¾	20¾	
	6	11	8	7/8	9½	11¾	7¾	5¼	30½	8½	13¾	20¾	

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR. @Temp.
 DATA _____
 MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____